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(54) Title: COMPOSITIONS COMPRISING BONE MARROW CELLS, DEMINERALIZED BONE MATRIX AND VARIOUS SITE-REACTIVE POLYMERS FOR USE IN THE INDUCTION OF BONE AND CARTILAGE FORMATION

(57) Abstract: A composition comprising bone marrow cells (BMC) and demineralized bone matrix (DBM) or demineralized tooth matrix (DTM), together with a site-responsive polymer, optionally further comprising bone morphogenetic protein/s (BMP) and/or other active agents, particularly for use in the transplantation of mesenchymal progenitor cells into a joint or a cranio-facial-maxillary bone, alveolar bone of maxilla and mandibula, spine, pelvis or long bones, or for construction or reconstruction of any extra skeletal bone, including for mechanical or biological support of artificial implants to the joint or of the joint or to the bone, for restoring and/or enhancing the formation of a new hyaline cartilage and subchondral bone structure. A kit is provided for performing transplantation of the composition into a joint, maxillary or mandibular alveolar bone or any bony structure of a mammal, including support of artificial implants.